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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/501,251	02/10/2000	Josef Theurer	THEURER-21	3590

20151 7590 08/13/2003

HENRY M FEIEREISEN, LLC
350 FIFTH AVENUE
SUITE 4714
NEW YORK, NY 10118

[REDACTED] EXAMINER

WEST, JEFFREY R

[REDACTED] ART UNIT [REDACTED] PAPER NUMBER

2857

DATE MAILED: 08/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/501,251	THEURER ET AL.
	Examiner	Art Unit
	Jeffrey R. West	2857

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 27 May 2003.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1 and 3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1 and 3 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 10 February 2000 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,821,933 to Plasser et al. in view of U.S. Patent No. 5,233,357 to Ingensand et al.

Plasser discloses a method of surveying a track comprising positioning a mobile measuring vehicle and a stationary measuring vehicle at end points of a track section to be measured during a measuring cycle, the mobile measuring vehicle being designed for mobility along a reference line in the form of an optical measuring beam between an emitter mounted on the stationary measuring vehicle and a receiving unit mounted on the mobile measuring vehicle and supported by flanged rollers (column 6, lines 66-67) on the track section (column 5, lines 5-34 and column 7, lines 18-46). Plasser discloses determining, at the start of each measuring cycle, position coordinates of the emitter/stationary measuring vehicle relative to a fixedly installed reference location adjacent the track section to be measured, the coordinates of the reference location being known within a terrestrial coordinate system, and aligning the reference line with the mobile measuring vehicle on the basis of the position data determined with the aid of the location information

provided by the reference location (column 8, lines 9-12). Plasser discloses registering, as a correction measurement value, a change in the position of the receiving unit relative to the reference line in dependency on an actual track position of the receiving unit transmitted by an odometer attached to the flanged rollers, as the mobile measuring vehicle advance in the direction towards the stationary measuring vehicle to survey the track (column 6, lines 6-32 and column 8, lines 12-33).

While Plasser does disclose determining the initial position of the emitter/stationary measuring vehicle based upon reference locations adjacent the track section (column 3, lines 10-16), Plasser doesn't disclose using a GPS receiver in order to determine the position of the emitting surveying apparatus.

Ingensand teaches a surveying system comprising a surveying device that contains a GPS receiver fixed thereon (column 2, lines 23-33) wherein the surveying device emits a beam to survey the position of several points based upon the initial position of the device determined by the GPS receiver (column 2, lines 34-36 and 64-68).

It would have been obvious to one having ordinary skill in the art to modify the invention of Plasser to include using a GPS receiver in order to determine the position of the emitting surveying apparatus, as taught by Ingensand, because Plasser teaches a time-consuming inaccurate method for determining the position of the mobile device based upon telegraph poles and marking posts (column 2, lines 27-32) and Ingensand suggests that the combination would have provided a method

for determining this initial position with a faster, more convenient method as well as with increased accuracy (column 1, lines 21-30). Further, the invention of Plasser was published in 1974. At this time GPS devices were not readily available, however, one having ordinary skill in the art would recognize that since the publication of the invention of Plasser, GPS has become a well known, accurate, and convenient system for determining the exact position of devices, as would have been applicable in the invention of Plasser.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 3,706,284 to Plasser et al. teaches a track working apparatus with laser beam reference.

U.S. Patent No. 3,687,081 to Plasser et al. teaches a method of continuously correcting a track position.

U.S. Patent No. 5,825,328 to Schipper et al. teaches a method for determining location fix coordinates for a selected location, such as a mobile station location, with increased accuracy for GPS systems.

U.S. Patent No. 5,077,557 to Ingensand teaches a surveying instrument with a receiver for a satellite position-measuring system and method of operation.

U.S. Patent No. 4,812,991 to Hatch teaches that GPS systems are now a highly popular means of accurately and precisely determining a receiver's coordinates

which have numerous practical applications and, depending on the time duration over which the measurements are taken, can determine a receiver's position to sub-centimeter accuracy.

"GPS History, Chronology, and Budgets" teaches the history of GPS including applicable dates.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey R. West whose telephone number is (703)308-1309. The examiner can normally be reached on Monday through Friday, 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (703)308-1677. The fax phone numbers for the organization where this application or proceeding is assigned are (703)308-7382 for regular communications and (703)308-7382 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

jrw
August 4, 2003


MARC S. HOFF
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800